

## Molenwaard Civil Society Broadband (The Netherlands) Working Document



*This case study was prepared in the framework of the ENRD Thematic Work on Smart and Competitive Rural Businesses ([https://enrd.ec.europa.eu/thematic-work/smart-and-competitive-rural-areas/rural-businesses\\_en](https://enrd.ec.europa.eu/thematic-work/smart-and-competitive-rural-areas/rural-businesses_en)) that was running between August 2016 and July 2017. A comparative case study was developed entitled 'Community broadband: New digital opportunities for rural areas' based on the Molenwaard Community Broadband case example (the Netherlands) the experience of North-Western Kuhmo Village Optical Fibre Cooperative (Finland).*

### FACTS

**Location:** Molenwaard, the Netherlands

**Timing of the initiative:** From 01/2013 to 12/2019

**EAFRD-funding:** None

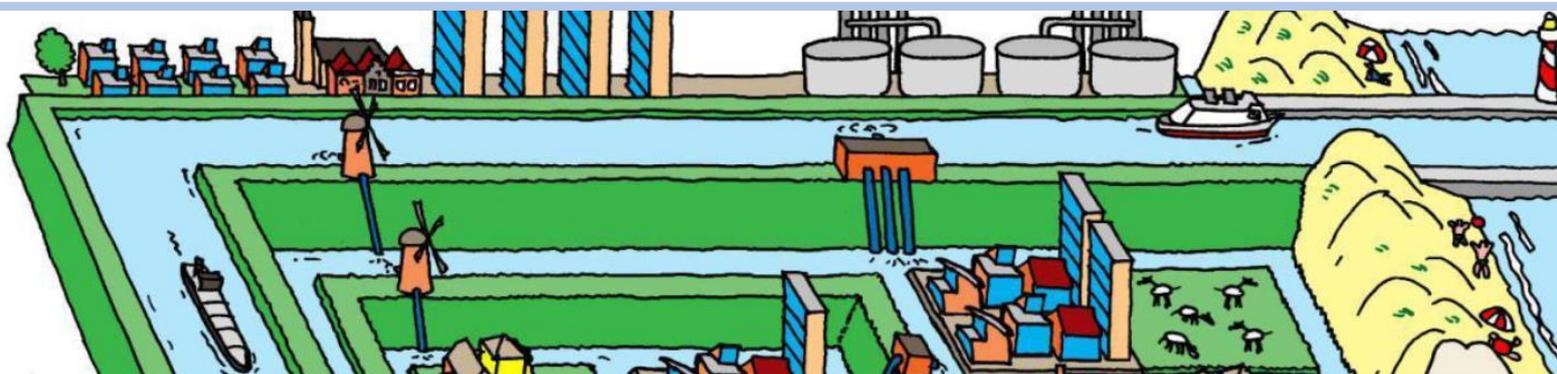
**Other public funding:** Municipality Molenwaard provided €30.000 for launching the project

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### Summary of main results:

- ✓ A business case and plan developed for community broadband (158km planned network)
- ✓ 5345 (66,5% of population) potential subscribers
- ✓ 8 volunteers have been mobilised, and local community members engaged in the process
- ✓ 30 entrepreneurs paid their advance to contribute to the construction of the network





### Short description of the project

In many rural areas of Zuid-Holland there is no fast broadband available. In the municipality of Molenwaard the commercial parties provide fast broadband only to few villages these being the most populous ones. The other villages are not interesting from commercial point of view; therefore, their inhabitants do not have access to fast broadband. In Molenwaard a group of citizens started an initiative to organise their own fast broadband network (owned by the civil society). The main purpose of the project is to provide access to a fast fibre network to the whole municipality of Molenwaard (including entrepreneurs and households at the outskirts).

## 1. SETTING UP THE BROADBAND INFRASTRUCTURE

### 1.1 How to start it off?

The key steps to start up the community broadband included:

1. A core team (8 volunteers) was mobilised to design the process (see also section 1.3 below). Those 8 people volunteered after an information meeting organised by the municipality of Molenwaard. Initially, a professional project leader was hired, but after 5 months the involvement of the project leader was not necessary and the team itself developed into a team of professionals working on a voluntary basis.
2. The team started to attract interest of potential subscribers. The first 50% of interested households do not need to pay connection charges (as this is incorporated within the investment costs). Entrepreneurs invested by paying the charges in advance of being connected to the network.
3. An engineering company defined a technical framework for the realisation of the infrastructural work.
4. Based on this framework the financial experts developed the budget.
5. As a next step, investors for the different stages of work need to be identified<sup>1</sup>.
6. The investment project will be put out for tender in 2018.

### 1.2 What are the technical specificities of the broadband infrastructure set up?

This project started to realise a fibre optic broadband network for all citizens in Molenwaard (even at the outskirts), offering 100Mbps data transfer (upload and download) speed. The total length of the network is 158km and the number of (potential) connections 5345 (local households and enterprises).

### 1.3 What are the financial requirements for setting up and operating the network?

The estimated cost of the network is around €9 million. The first version of the technical framework was determined by the initial project leader and afterwards a second opinion was done by Hartman en De Koning, a well-established engineering company. The core team benchmarked this framework.

Currently, some financial specialists are working on the financial planning/budget (on some pro-bono basis). Funding is not yet secured, nor applications are made, however, the plans are that:

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<sup>1</sup> Several small investors are identified, but overall the funding secured is not sufficient to start the project yet.

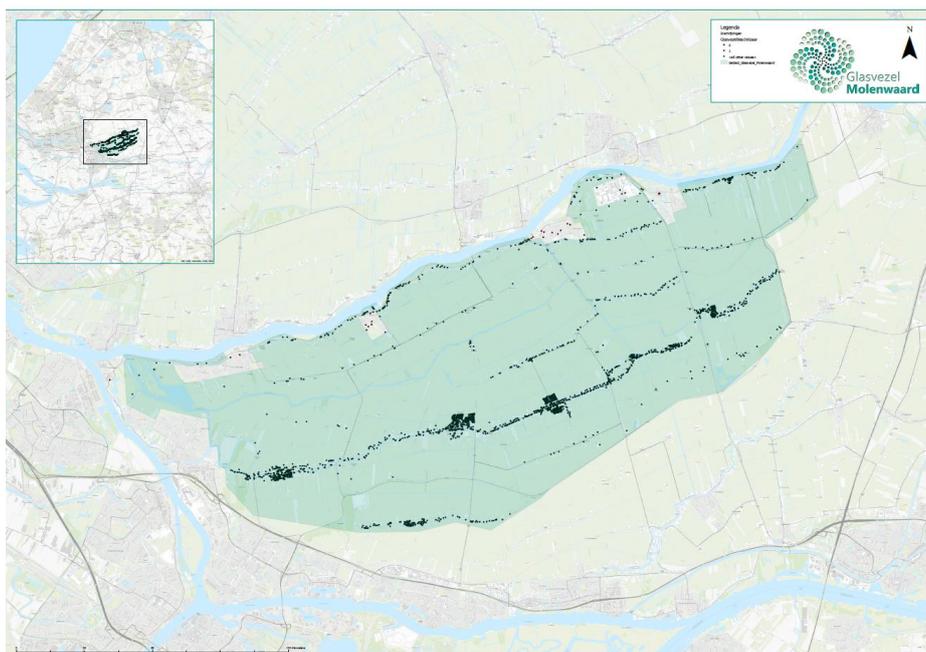


- About 20% of the investments are expected to be private investments (crowdfunding). This is not yet secured; however, 30 entrepreneurs already paid in advance their subscription costs and offered a loan (to be considered as risk capital).
- 80% is expected to be funded by loans (to be paid back by the Molenwaard Broadband NGO through their revenues gained from subscriber fees) and public funding. The team is currently in touch with the Connecting Europe Broadband Fund (CEBF) of the European Investment Bank (EIB) and is hoping to find suitable funding opportunities.

Funding needs to be secured for different stages of the work:

- **The Network - The fibre part underground & stations:** Estimated to be €8,2 million (with plans to pay back loans within 30 years). Credits would be secured through a mortgage (the physical network being the security for the mortgage). Unfortunately, banks do not provide mortgages for fibre networks. Municipalities can and sometimes do, but they are very cautious to avoid (the appearance of) state aid. This results in interest rates of 4% and higher (compared to average bank rates of approximately 2% and lower). Furthermore, the costs of the fibre are very high due to the specific conditions (boggy soil and dikes) – see also specific challenges below.
- **The Hardware – Switches and optical cards & lightening equipment<sup>2</sup>:** Investment is estimated to be around €800.000 (with a redemption period of 5 years). NGO Molenwaard Broadband intends to be the owner of the hardware to be able to take key decisions, e.g. on which connections can be made, who can use the network and what services to be made available at what prices, etc. Molenwaard Broadband aims to find suitable funding (loans) for the costs of hardware.
- **Software & Data – internet service providers:** As the fibre network in Molenwaard will be an open network, all providers can offer services using the network. Usually the provider pays for the cost of the physical connection point of the subscriber to the network.

### 1.4 How to engage the community?



<sup>2</sup> This equipment is used to communicate information through fibre as light pulses. The equipment consists of a central unit (a switch and optical line cards in the Point of Presence) and peripheral devices at the user location.



Community engagement was secured through several stages:

- The initiative was started in 2014 **by people from the village** who got inspiration from another fibre project that they visited in the Netherlands. The municipality hired a profession to kick of the initiative, and the first general meeting was organised by the expert calling for volunteers and form the core team to design the process. The core team developed an action plan, which was presented at the meetings in the villages.
- **Creating awareness and call for volunteers:** Some citizens suggested the idea of a civil enterprise for fast broadband for the whole area of Molenwaard. The local authorities agreed and facilitated an information meeting. At informal community meetings the idea was shared, and a group of enthusiastic citizens stood up to form a core team. The members of the core team also have specific expertise and work experience (financial, technical, ICT etc.)
- The core team designed the process and started a **promotion campaign to inform the citizens**, and to create interest and commitment from the community. Flyers were developed, and information was provided at tours to every village centre of Molenwaard<sup>3</sup> (8 meetings) and at networking events for entrepreneurs. Within 5 months, 66,5 % of the citizens of 14 villages registered as 'potential subscribers'. Furthermore, social media (twitter/Facebook) and newsletters were sent to inform stakeholders about the progress.

### Specific challenges & lessons during the setting up of the broadband infrastructure

- To get enough **volunteers** with specific skills, competences and free time available to bring this initiative further. This has been overcome, as enthusiastic volunteers were attracted by the initiators and their networks.
- **Funding for starting-up/ promoting the project** was difficult to obtain. This was overcome through the Municipality of Molenwaard providing €30,000 for a professional project manager (fees) and a communication campaign (flyers, website, banners, etc.) at the start of the project. Furthermore, entrepreneurs payed in advance for their future connection (taking the risk that if the project fails, they lose their money).
- Although financial plans are prepared, and the initiators are currently considering applying for CEBF from EIB, the **funding is not yet secured** and therefore, there are still a lot of risks whether the project can be implemented.
- The fibre network must be realised in the boggy soils of the area. The dikes must be treated very carefully as they are important for the water management system. Those factors lead to high cost solutions for digging works. Technical expertise is indispensable.

## 2. OPERATING THE BROADBAND INFRASTRUCTURE AND SERVICES

### 2.1 Who provides the internet services?

The aim is to create an open network that all providers could use, creating the best match with the ambitions of this civil initiative and a competitive offer in favour of the customers. For the subscribers the fibre is not more expensive than other services (prices from €39.95 per month per connection).

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<sup>3</sup> In total 14 villages were engaged (covering some 13,000 companies and households). However, commercial companies supplied glass fibre to 6 of the most populated villages (i.e. those with easier access), whereas the remaining 8 villages remained without access and started the community action.



### 2.2 How is the broadband infrastructure operated & financially sustained?

The first 55% of the subscribers do not have to pay for the connection to provide an incentive for new subscribers (that can be both individual households and businesses).

According to the 'return on investment' (ROI) calculations, the project becomes 100% sustainable through a positive balance after Year 3, producing a positive operational cashflow after this time (i.e. revenues from connection fees - €28 per connection/month - would compensate for the costs (services and management of the network infrastructure and of the hardware, for business management, amortisation, interest and other costs). However, this much depends on the available interest rate (which is not yet known as investors are not yet identified). The revenues from operating the network would be owned by Molenwaard Broadband NGO.

### 2.3 What have been the main outputs, results of the project?

- A comprehensive business case and plan developed.
- The project has no tangible results yet as the construction work has not yet started.
- The main benefits of the project so far have been the commitment, involvement and contribution of community volunteers (professionals who work pro bono) through their expertise and skills. Core members meet approximately once in every two weeks.
- The project has successfully engaged local stakeholders and raised their awareness, as a result 66,5% of citizen registered as potential subscribers.